

THE THEORY OF COMPLEMENTARY DISTRIBUTION AS A TOOL OF DISCOVERY: AN ANALYSIS OF THE PHONEMIC STATUS OF THE SIBILANTS IN THE VENEZIA GIULIA VARIANT OF STANDARD ITALIAN

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Abstract

In Standard Italian the phonemic status of [s] and [z] in the intervocalic position has remained to this day a contentious issue. Given the impasse of finding a satisfactory explanation of the sporadic nature of voicing in the Italian sibilants within the taxonomic framework of the phonemic system of Standard Italian, I repeated the attempt in the case of the Venezia Giulia dialect, and for the following reasons first, this is the dialect I am most familiar with; second, the experiment might prove an excellent opportunity to test A. Liberman's claim that the theory of complementary distribution is useless as a tool of discovery. The following are my findings:

- 1- In the Venezia Giulia dialect sound system /z/ is a distinct and separate phoneme not to be confused with the voiced allophone of /s/.
- 2- Contrary to what A. Liberman maintains the theory of complementary distribution can be a useful tool of discovery.

In Standard Italian (S.I.) the phonemic status of [s] and [z] in intervocalic position has remained to this day a contentious issue. Witness analysts like L. Romeo [1] and J. Arce [2] who maintain that [s] and [z] are separate phonemes while others like R.J. Di Pietro [3], R.A. Hall Jr. [4], Christopher Court [5], G. Porru [6], place both sounds in the same class albeit [z] is an allophone of [s]. Among the recent proposals that were made to arrive at a satisfactory explanation of the sporadic nature of voicing in the Italian sibilants the one made by R.J. Di Pietro is noteworthy particularly because of the novelty of his approach. According to Di Pietro, the contrast between [s] and [z] can be solved in terms of a small number of phonological rules operating as matrices of co-occurring distinctive sound features. To this end he submits two alternative versions of a generative grammar model. In his first version the author formulates a general rule in which he posits intervocalic [s] as being always voiced. This on the grounds that morphemes with [z] are more numerous than those with [s]. In the alternate version he posits

the Tuscan dialect as a pattern because "it is the most diversified of the general types". Accordingly, each morpheme containing an intervocalic /s/ is given the voiced feature. There are some serious difficulties with Di Pietro's proposed models, the choice of the Tuscan pronunciation being one of them. This regional dialect where words as *cortese* "courteous", *francese* "French", *paese* "country", *quaresima* "Lent" are pronounced with voiceless /s/ in Siena and with voiced /s/ in Florence does not seem quite appropriate for the formulation of phonological rules able "to furnish us with a simple way to incorporate regional variations of the standard language within the total grammar". More questionable is Di Pietro's choice of [z] as the underlying form of /s/, when it occurs in intervocalic position, on the grounds that "morphemes with [z] are more numerous than those with [s]". A choice of [z] as the more natural or as the unmarked member of the pair is in violation of the implicational law whereby a language does not have [z] in its sound inventory unless it also has [s] while the converse is not true. The information about the pronunciation of /s/ as either [s] or [z] in a morpheme that is not predictable on the basis of general rules is contained in the underlying representation, and the phoneme for the two sibilants is clearly [s] and not [z]. Witness Latin, Spanish and many Southern Italian dialects that all have [s] but not [z].

Given the impasse of finding a satisfactory explanation of the sporadic nature of voicing in the Italian sibilants within the taxonomic framework of S.I., I decided to repeat the attempt in the case of a regional dialect. For the experiment I selected the Venezia Giulia (V.G.) variant, in particular that of Trieste and Istria, and for the following reasons first, the V.G. phonetic system is quite close to that of S.I.; second, this is the dialect I am most familiar with; third, the experiment would give me an opportunity to test A. Liberman's [7] claim that the theory of complementary distribution (C.D.) is useless as a tool of discovery; fourth, should the experiment prove successful its findings might cast some light on the problems involved in S.I.

The V.G. phonetic system has a long and complex history which to this day has not yet been clearly understood. This situation is partly due to the fact that the V.G. vernacular literature is very modest and, furthermore it contains variant spellings for the same word; partly because, not infrequently, an original Latin phoneme appears to have shifted into two and even more different phonemes. Furthermore, the fact that phoneme /z/ does not exist in S.I. and that, in Italian spelling, its symbol is used to represent the two apico-dental allophones [ts] and [dz] add to the complexity of the problem.

In the V.G. dialect [s] and [z] are present in C.D. as follows: The sibilant is voiced when followed by a voiced consonant, e.g. [zberla], *schiaffo*, "slap", and it is voiceless when followed by a voiceless consonant, e.g. [spotar], *spogliare*, "to undress", and in word final position, e.g. [plu:s], *piscio*, "piss". Before vowel, in word initial position and intervocalically, the two sibilants are in free alternation e.g. [se], *se*, "if"; [ze], *è*, "is"; [ru:z], *riso*, "rice"; [le:so], *lesso*, "boiled". How are we going to classify these contrasts? As partially allophonic? or as partially phonemic? or neither? To solve this problem let's analyse each environment in which the two sibilants are in contrastive distribution.

Word Initial Position

Contrary to S.I. prevocalic [z] does occur in word initial position in a significant number of words, e.g.:

V.G.	S.I.	
1) [za]	già	"already"
2) [zaia]	moltitudine	"a large number of"
3) [ze]	sei	"you (sing.) are"
4) [zekun]	zecchino	"sequin"
5) [zenero]	genero	"son-in-law"
6) [zuma]	grande freddo	"very cold"
7) [zumeta]	freddolino	"cool air"
8) [zungo]	zinco	"zinc"
9) [zuncòo]	ginocchio	"knee"
10) [zuzania]	zizzania	"darnel-grass", "dissension"
11) [zuzala]	freddo	"cold"
12) [zo]	giù	"down"
13) [zoger]	giocare	"to play"
14) [zogatolo]	giocattolo	"toy"
15) [zogo]	gioco	"play"
16) [zonta]	giunta	"a part added"
17) [zontar]	aggiuntare	"to unite by addition"
18) [zoventu]	gioventu	"youth"

We submit that, in V.G., prevocalic [z] in word initial is not an allophone of /s/ but a distinct, separate phoneme. Witness the following minimal pairs:

V.G.	S.I.	
[zuma] : [suma]	cimo	"rope used on ship-board", "summit"
[zumeta] : [sumeta]	diminutive of [suma]	
[za] : [sa]	sa	"he/she knows"
[ze] : [se]	siete	"you (pl.) are"
[zo] : [so]	so	"I know"
[zuzala] : [suzala]	giuggiola	"jujube"

Also historical grammar gives some evidence that the V.G. prevocalic [z] is a phoneme. Lexemes 6 and 7 are borrowings from Slovenian or Croatian. In both languages /z/, whose orthographic symbol is also *z*, is not an allophone of /s/ but a distinct, separate phoneme. Lexeme 3 has been traditionally spelt *ze* in vernacular writings since as far back as the XII Century and possibly earlier. Its history is akin to French *ce*, both forms being derived from Latin *ecce*, that in Low Latin came to be used with the verb *esse*, "to be", to give prominence to a noun, an adverb and the like. As to the remaining lexemes the prevocalic [z] is clearly not an allophone of /s/ but the result either of a shift from the Latin or Italian voiced affricate /j/ e.g.:

Latin	S.I.	V.G.	
[iam]	[ja]	[za]	"already"
[iener]	[jenero]	[zenero]	"son-in-law"
[ienu]	[juncio]	[zuncòo]	"knee"
[iugam]	[ju]	[zo]	"down"
[iokas]	[joko]	[zogo]	"play"
[iuventas]	[joventu]	[zoventu]	"youth"

or of a shift from Standard Italian /dz/, e.g. [dzukol] > [zungol], [dzudzanìa] > [zuzania], [dzek:uno] > [zekun].

Intervocalic Position

Save for the two notable exceptions that we shall examine in the next paragraph, we can say that, as a rule, in the V.G. dialect, the intervocalic /s/ is voiced e.g. [kaza], *casa*, "house"; [spozza], *sposa*, "bride". The sibilant is also voiced in words in which it is the result of a shift from Latin or S.I. /č/, /j/ and few other consonants, e.g. /k/ and /dz/:

Latin	S.I.	V.G.	
[façamas]	[façamol]	[fazemo]	"we make"
[rationem]	[raçone]	[razon]	"reason"
[mediam]	[medz:ò]	[me:zo]	"middle"
[buk:a]	[buka]	[buzo]	"hole"

Before trying to establish the phonemic status of the intervocalic voiced sibilant it will be necessary to take into consideration the two exceptions we mentioned earlier. They are as follows:

1. Intervocalic [s] is voiceless in all words that in S.I. have a geminate in the correspondent position. The V.G. dialect has no long consonants consequently all S.I. geminates shift into short consonants in V.G., and the vowel preceding the shortened consonant shifts from short and open into tonic long or semi-long, e.g.:

<u>S.I.</u>	<u>V.G.</u>	
[pɔs:o]	[pɔ:so]	"I can"
[fɛlɔ:ts:ɔmo]	[fɛlɔ:ts:ɔmo]	"very happy"

2. The intervocalic [s] is voiceless in all words that in S.I. have phoneme /š/ in the correspondent position, e.g.:

<u>S.I.</u>	<u>V.G.</u>	
[lašare]	[lasar]	"to leave"
[bɔša]	[bɔsə]	"snake"
[lɔšo]	[lɔso]	"smooth"

We submit that in V.G. [s] and [z] in intervocalic position are two separate phonemes. Witness the following minimal pairs chosen at random, e.g.:

[bɔ:so] : [bɔ:zo]	[čɛ:sa] : [čɛ:za]
"low" "kiss"	"cease" "church"
[pɛ:se] : [pɛ:ze]	[špɛ:so] : [špɛ:zo]
"fish" "scales"	"often" "spent"

Historical grammar offers some evidence that, at one time, the two sibilants were treated as separate phonemes. From ancient texts [8] dating back to the XII and XIII century written in the old Venetian dialect (O.V.) it appears that the sibilants s and z were often graphically represented by two distinctive different symbols. For example, a long s is often represented by symbol ṣ either short or long, e.g.:

<u>S.I.</u>	<u>O.V.</u>	
essa	esa or essa	"she"
possessione	posisione	"possession"
essere	esser	"to be"
rosso	roso	"red"

Symbol ṣ is also used in O.V. to represent intervocalic [s] in all instances in which the voiceless phoneme is the result of a shift from S.I. /š/, e.g.:

<u>S.I.</u>	<u>O.V.</u>
lascio [lašio]	laso [laso] "I leave"
fascina [fašna]	fasina [fasna] "faggot"

Conversely, the intervocalic voiced sibilant [z] is graphically represented by symbol z, e.g.:

<u>S.I.</u>	<u>O.V.</u>
speso [spezo]	spexo [spezo] "spent"
casetta [kaset:a]	chaxella [kazela] "small house"

Symbol z is also used to represent the intervocalic [z] in words in which the voiced sibilant is the result of a shift from S.I. /č/ or /j/, e.g.:

<u>S.I.</u>	<u>O.V.</u>
facciamo [fač:amo]	faxemo [fazemo] "we make"
piace [piače]	plaxe [plaxe] "it pleases"
ragione [rajone]	raxon [razon] "reason"
cugina [kujna]	choxina [kozna] "cousin"

To conclude, the implication of this presentation is that:

1. in the V.G. dialect the sibilants /s/ and /z/ are two distinct separate phonemes. Phoneme /s/ realizes itself as [s] or [z]. Both allophones are present in C.D. with [z] occurring before voiced consonants. Phoneme /z/ has no voiceless allophone. It occurs in word initial position before vowels and, in intervocalic position.

The following table summarizes the situation of the two sibilants as described above:

	<u>V.G.</u>		
origin (historical)	initial +vowel	initial +voiced cons.	inter-vocalic
/s/	[s]	[z]	[z]
/č/, /j/, /dz/, /z/*	[z]	[z]	[z]
[s:], /š/			[s]
	[s]		[z]

* From the Sloven z or O.V. z

2. Historical grammar suggests that the V.G. phoneme /z/ can be traced back to Latin z. This symbol, that in Classical Greek was used to transcribe the aspirate

stop [kʰ] was borrowed by Latin scribae from Western Greek (Southern Italy and Sicily). Since z represented a sound not found in Latin, it gave trouble to the Romans in borrowed words. The nearest sound that the Romans had was the unaspirated [k] by which they accordingly at first represented it. Later on they used z to transcribe the free alternation s/z. This peculiar use of the symbol z is still evident in French in such alternations as soixante and sixième where intervocalic z is voiceless in the former and voiced in the latter. Also the V.G. dialect offers few examples of the free alternation s/z in intervocalic position that can be accounted for by positing, not unlike French, Latin z as the alternating sibilant, e.g.:

<u>S.I.</u>	<u>V.G.</u>
faccio [fač:o]	faxo [faso] "I do"
facciamo [fač:amo]	faxemo [fazemo] "we do"

This situation also suggests that the confusion, in S.I., with regard to the two sibilant allophones [s] and [z] originated when Italian scribes substituted the Latin s for the Latin z. If our findings are correct then A. Liberman is wrong there where he maintains that complementary distribution is useless as a tool of discovery for "allophones can never be obtained before phonemes, and all attempts to reverse the sequence to obtain allophones in order to assemble them into phonemes is self-deception". It is by assembling the allophones [s] and [z] that we were able to prove the presence of the voiced sibilant phoneme /z/ in the Venezia Giulia dialect.

Bibliography

- [1] L. Romeo, «Sibilants in Standard Italian: Facts and Fiction in Phonemic Analysis», IRAL, IV, 1, March, 1966, pp. 1-5.
- [2] J. Arce, «Il numero dei fonemi in italiano in confronto con lo spagnolo», Lingua Nostra, 23, 1962, pp. 48-52.
- [3] R. J. Di Pietro, «Phonemics, Generative Grammar and the Italian Sibilants», Studia Linguistica, V, 21, 1961, pp. 96-106.
- [4] R. A. Hall, jr., «Italian [z] and the Converse of the Archiphoneme», Lingua, 9, 1960, pp. 194-197.
- [5] C. Court, «On /s/ and /z/ in Standard Italian», Lingua, 18, 1967, pp. 290-295.
- [6] G. Porru, «Anmerkungen über die Phonologie des Italienischen», Travaux du Cercle Linguistique de Prague, VIII, 1939, pp. 187-208.
- [7] A. Liberman, «On the Uses of Complementary Distribution», Proceedings of the Tenth International Congress of Phonetic Sciences, Edited by A. Cohen and M.P.R. Van den Broecke, Dordrecht, Holland: Foris Publications, 1984, pp. 647-649.
- [8] Testi veneziani del Duecento e dei primi del Trecento, Edited by Alfredo Stussi, Pisa: Nistri-Lischi Editori, 1965.

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